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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,664	11/24/2003	Bertrand Haas	F-713	6208
7590 Pitney Bowes Inc. Intellectual Property and Technology Law Dept. 35 Waterview Drive P.O. Box 3000 Shelton, CT 06484			EXAMINER	
WORKU, NEGUSSE				
			ART UNIT	PAPER NUMBER
2625				
			MAIL DATE	DELIVERY MODE
			04/08/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/720,664

**Applicant(s)**

HAAS ET AL.

**Examiner**

NEGUSSIE WORKU

**Art Unit**

2625

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-24 is/are allowed.
- 6) ☒ Claim(s) 1-7, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date 09/26/07; 11/24/03
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1 have been considered but are moot in view of the new ground(s) of rejection. Applicant argues, the prior art does not teach that the claimed limitation as amended. Upon further review, the examiner has incorporated the below cited prior art to further teach this limitation.

### **Claim Rejections - 35 USC § 103**

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7, 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Echizen et al., (USP 6,728,408), in view of Braudaway et al., (USP 5,925,892), and further in view of Zeller (USP 7,054,461).

With respect to claims 1, Echizen et al., teaches a method of watermarking an image to facilitate detection of copying of the image, (as shown in fig 1) the method comprising: providing image data that represents an image, (image of fig 1, provides block image data divided from image of fig 1), the image data comprising pixel data that represents respective gray-scale values of pixels of the image (image of pixels block (k x n, pixels represent color (RGB) including gray scale, col.4, lines 49-55); forming a plurality of data blocks from the image data, each data block consisting of pixel data which corresponds to a respective region of the image (as shown in image 1 of fig 1, plurality of data blocks [block interval] as seen fig 1, col.4, lines 49-55); determining for each of the data blocks an average value of the pixel data in the data block (as shown in step 203 of fig 2, a determination has been obtained for all the block patterns of 64 types, col.4, lines 46-50); determining for each of the data blocks (data block shown in fig 1) a target for the average value of the pixel data in the data block (change of sum of pixel values col.4, lines 43-52).

Echizen (408) does not expressly disclose adjusting respective values of at least some of the pixel data in each of at least some of the data blocks to shift the average value of the pixel data in the respective data block toward the target for the respective data block.

Braudaway et al., in the same area of protecting image with an image watermark (as shown in fig 1), teaches disclose adjusting respective values of at least some of the pixel data in each of at least some of the data blocks to shift the average value of the pixel data in the respective data block toward the target for the respective data block,

(computer of fig 1, includes a number of soft ware modules 112 that perform image processing such as scaling and enhancement of the image data provided by scanner 100, col.6, lines 25-31).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging device of Echizen et al., by the teaching of Braudaway et al., for the purpose of obtaining a perfect final image, for all the prints of different color to be exactly superimposed.

Echizen et al., (USP 6,728,408), in combination with Braudaway et al., (USP 5,925,892), still do not teach or disclose creating a fragile water mark, and printing a printed image with the fragile watermark on the basis of the image data after adjustment.

Zeller '461' in the same area of scanning, printing and a watermarking image teaches creating a fragile water mark, (col.5, lines 30-40), and printing a printed image with the fragile watermark on the basis of the image data after adjustment (col.5, lines 30-40).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging device of Echizen '408' and Braudaway '892' by the teaching of Zeller '461' for the purpose of obtaining a perfect final image, for all the prints of different color to be exactly superimposed.

With respect to claims 2, Echizen et al., teaches the method, (fig 1) wherein the respective target for each data block (data block of fig 4A) is determined based at least in part on a value of a message bit that corresponds to the respective data block (see description of fig 1 and 2).

With respect to claims 3, Echizen et al., teaches the method, (as shown in fig 1) wherein the respective target for each data block (block interval of fig 4A) is selected from a predetermined set of gray scale levels (col.3, lines 50-55) as a one of said set of gray scale levels to which the average value of the pixel data in the data block is closest, (a pixel data block shown of in fig 11, is 8x8 pixels).

With respect to claims 4, Echizen et al., teaches the method, (as shown in fig 2) wherein the pixel data adjusted at step corresponds to pixels at a center of the region of the image to which the data block corresponds (see description of fig 2).

With respect to claims 5, Echizen et al., teaches the method, (as shown in fig 1 and 2) wherein each of the data blocks (data block as shown in fig 2) corresponds to a respective discrete region of the image (col.3, lines 50-55).

With respect to claims 6, Echizen et al., teaches the method, wherein the regions are rectangular (macro block of pixels, shown in fig 11, are rectangular).

With respect to claims 7, Echizen et al., teaches the method, (as shown fig 2) wherein the regions are square (col.4, lines 45-50).

With respect to claims 9, Echizen et al., teaches the method, (as shown in fig 2) wherein the image data is subjected to a transformation that is performed after step and before step (see step 901-905 of fig 9).

With respect to claims 10, Echizen et al., teaches the method, (as shown in fig 2) wherein step is completed with respect to a particular one of the data blocks (data block 2 of fig 3) when the average value of the pixel data in the particular one of the data blocks substantially equals the respective target for the particular one of the data blocks (data block of fig 2).

***Allowable Subject Matter***

3. Claims 11-22 are allowed.

With respect to claims 11-17, the prior art does not teach or disclose determining for each of the data blocks an average value of the pixel data in the data block; determining for each of the data blocks an index value based on the average value of the pixel data in the data block, for each data block, calculating a difference between the index value for the data block and a value that represents a target value for a

corresponding block of pixel data that was used to generate the original printed image, deterring whether the PIUE is the original printer images with the fragile watermark.

With respect to claims 18-24, the prior art does not teach or disclose determining for each of the data blocks an average value of the pixel data in the data block; determining for each of the data blocks an index value based on the average value of the pixel data in the data block, for each data block, calculating a difference between the index value for the data block and a value that represents a target value for a corresponding block of pixel data that was used to generate the original printed image, deterring whether the PIUE is the original printer images with the fragile watermark.

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any



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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to *NEGUSSIE WORKU* whose telephone number is (571)272-7472. The examiner can normally be reached on 9A-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Edward Coles* can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-10

/Edward L. Coles/

Supervisory Patent Examiner, Art Unit 2625

/Negussie Worku/ Examiner, Art Unit 2625

